

## Listing Of Claims

1-36 Cancelled

37. (New) A venous access catheter shaft comprising:

a proximal tube segment of a first polymer material having a first durometer,

a distal tube segment of a second polymer material having a second durometer,

said first durometer being substantially higher than said second durometer,

said first and second polymer material having radiopaque filler, the percentage by weight of said filler in said second polymer material being substantially greater than the percentage by weight in said first polymer material,

a transition tube segment between said proximal and distal segments, said transition tube segment having a continuously varying mixture of said first and second polymer materials,

the ratio of said first polymer material to said second polymer material continuously decreasing from the proximal end to the distal end of said transition segment,

the percentage by weight of said filler continuously increasing from the proximal end to the distal end of said transition segment,

said segments formed by a continuous extrusion process of mixing said polymers to provide an integral catheter tube without bonds or welds.

38. (New) The catheter shaft of claim 37 wherein: said continuous decrease of polymer ratios and continuous increase of filler weight in said transition zone are substantially linear.

39. (New) The catheter shaft of claim 37 wherein: said percentage by weight of said filler in said distal segment is between 30 and 50%.

40. (New) The catheter shaft of claim 37 wherein: the burst strength of said proximal segment is at least 300 psi.

41. (New) The catheter shaft of claim 38 wherein: the burst strength of said proximal segment is at least 300 psi.

42. (New) The catheter shaft of claim 39 wherein: the burst strength of said proximal segment is at least 300 psi.

43. (New) The catheter shaft of claim 37 wherein: the flexibility within the transition segment continuously varies from less flexible at the proximal end to more flexible at the distal end.

44. (New) The catheter shaft of claim 43 wherein: the flexibility of the proximal segment is substantially equal to the flexibility at the proximal end of the transition segment and the flexibility of the distal segment is substantially equal to the flexibility of the distal end of the transition segment.

45. (New) The catheter shaft of claim 37 wherein: the proximal segment can withstand higher pressures than the distal segment.